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(54) Title: ENCODED MOLECULES BY TRANSLATION (EMT)

(57) Abstract: The present invention is directed to methods for the synthesis, selection, amplification and isolation of templated molecules having desirable properties. The invention makes it possible to synthesise a variety of different templated molecules other than  $\alpha$ -peptides and modified  $\alpha$ -peptides. In particular, the present invention enables synthesis of templated molecules such as  $\beta$ -,  $\gamma$ -,  $\omega$  peptides, carbopeptoids, vinylgous peptides, oligoanthrilamides, oligoureas, azapeptides (azatides), oligocarbamates, PNA, oligopyrrolinones, vinylgous sulfonamidopeptide, peptoids, azapeptoids and hydrazino peptides. It is possible in accordance with the methods of the invention to synthesise templated molecules comprising heterocyclic components, such as coumarins and quinolones, pyrazolone, isoxazolone, pyrimidones, phthalhydrazides, diketopiperazines, hydantoins, and benzodiazepines.

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